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RNase Inhibitor

Catalog #	Size	Concentration	Price	Qty	
M0307S	2,000 units	40,000 units/ml	$60.00	1	Add
M0307L	10,000 units	40,000 units/ml	$240.00	1	Add

Prices are in US dollars and valid only for US orders.

Download: MSDS PDF

Description:
RNase Inhibitor is a recombinant human placental protein which specifically inhibits ribonucle (RNases) A, B and C (1). It is not effective against RNase 1, RNase T1, S1 Nuclease, RNase H from Aspergillus. In addition, no inhibition of polymerase activity is observed when RNase Inh used with Taq DNA Polymerase, AMV or M-MuLV Reverse Transcriptases, or Phage RNA Polym (SP6, T7, or T3).

The 50 kDa protein inhibits RNases by binding noncovalently in a 1:1 ratio with an associatio greater than 10^{14} (2).

Source:
An *E. coli* strain that carries the Ribonuclease Inhibitor gene from human placenta.

Reaction & Storage Conditions

Unit Definition:
One unit is defined as the amount of RNase Inhibitor required to inhibit the activity of 5 ng of by 50%. Activity is measured by the inhibition of hydrolysis of cytidine 2, 3'-cyclic monophos RNase A.

Concentration:
40,000 units/ml

Storage Conditions:
20 mM HEPES-KOH
50 mM KCl
8 mM DTT
50% glycerol
pH 7.6 @ 25°C

Storage Temperature:
-20°C

Notes

Usage notes:
1. Since ribonucleases typically retain activity under denaturing conditions, care must be avoid denaturing RNase Inhibitor molecules which have complexed with a ribonuclease prevent the release of active ribonuclease, ter C and high

concentrations of urea or other denaturing agents should be avoided.

Quality Control

Endonuclease Activity:
Incubation of 200 units of RNase Inhibitor with supercoiled plasmid produced no nicked mole a two hour incubation at 37°C as determined by gel electrophoresis.

Ribonuclease Assay:
Incubation of 200 units of RNase Inhibitor with 1 µg of RNA at 37°C for 1 hour resulted in no degradation of RNA as determined by gel electrophoresis.

DNase Assay:
Incubation of 200 units of RNase Inhibitor for 1 hour at 37°C with 50 ng of radiolabeled DNA 3% of the radioactivity.

Quality control values for a specific lot can be found on the datacard which accompanies each

References

1. Blackburn, P. and Moore, S. (1982) Pancreatic Ribonucleases. *The Enzymes*, XV, Part I Academic Press, NY.
2. Blackburn, P., Wilson, G. and Moore, S. (1977) *J. Biol. Chem.*, 252,5904.

Companion Products

HiScribe RNAi Transcription Kit
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